

Claims

1. An automobile driven with a driving force from a driving source, said automobile comprising:

5 a deceleration force estimation module that estimates a deceleration force in a vehicle longitudinal direction, which is caused by steering of the vehicle and is applied to reduce speed of the vehicle;

10 a control value calculation module that calculates an adjustment control value used to adjust a steering-based acceleration, which is caused by steering of the vehicle and is applied to the vehicle, from the estimated deceleration force; and

15 a driving control module that drives and controls the driving source to ensure output of a driving force to an axle based on a drive change demand of the vehicle and the calculated adjustment control value.

2. An automobile in accordance with claim 1, wherein said control value calculation module comprises a magnitude
20 regulator that regulates magnitude of a longitudinal acceleration in the vehicle longitudinal direction out of the steering-based acceleration,

said control value calculation module calculating the adjustment control value, based on the regulation by said
25 magnitude regulator.

3. An automobile in accordance with claim 2, wherein said magnitude regulator regulates the magnitude of the longitudinal acceleration to decrease magnitude of a lateral acceleration in a vehicle lateral direction out of the steering-based
5 acceleration.

4. An automobile in accordance with claim 2, wherein said magnitude regulator decreases the magnitude of the longitudinal acceleration.

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5. An automobile in accordance with claim 2, wherein said magnitude regulator regulates the magnitude of the longitudinal acceleration to set at least one of a pitching level and a rolling level of the vehicle, which is caused by the steering-based
15 acceleration, to a specified level.

6. An automobile in accordance with claim 2, wherein said magnitude regulator regulates the magnitude of the longitudinal acceleration to reduce at least one of a pitching level and a
20 rolling level of the vehicle, which is caused by the steering-based acceleration.

7. An automobile in accordance with claim 1, wherein said control value calculation module comprises a phase adjuster
25 that adjusts phases of a longitudinal acceleration in the vehicle longitudinal direction and a lateral acceleration in

a vehicle lateral direction out of the steering-based acceleration,

said control value calculation module calculating the adjustment control value, based on the adjustment by said phase adjuster.

8. An automobile in accordance with claim 7, wherein said phase adjuster adjusts the phase of the longitudinal acceleration to decrease magnitude of the lateral acceleration.

9. An automobile in accordance with claim 7, wherein said phase adjuster lags the phase of the longitudinal acceleration relative to the phase of the lateral acceleration.

10. An automobile in accordance with claim 7, wherein said phase adjuster adjusts the phase of the longitudinal acceleration to set at least one of a pitching level and a rolling level of the vehicle, which is caused by the steering-based acceleration, to a specified level.

11. An automobile in accordance with claim 7, wherein said phase adjuster adjusts the phase of the longitudinal acceleration to reduce at least one of a pitching level and a rolling level of the vehicle, which is caused by the steering-based acceleration.

12. An automobile in accordance with claim 1, said automobile further comprising:

a steering angle detection module that detects a steering angle; and

5 a vehicle speed measurement module that measures a vehicle speed,

wherein said deceleration force estimation module estimates the deceleration force, based on the detected steering angle and the measured vehicle speed.

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13. An automobile in accordance with claim 12, wherein said deceleration force estimation module estimates the deceleration force to increase with an increase in the detected steering angle and to increase with an increase in the measured
15 vehicle speed.

14. An automobile in accordance with claim 1, wherein the driving source includes at least one of an internal combustion engine and a motor.

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15. An automobile control method of controlling an automobile, which is driven with a driving force from a driving source, said automobile control method comprising the steps of:

(a) estimating a deceleration force in a vehicle
25 longitudinal direction, which is caused by steering of the vehicle and is applied to reduce speed of the vehicle;

(b) calculating an adjustment control value used to adjust a steering-based acceleration, which is caused by steering of the vehicle and is applied to the vehicle, from the estimated deceleration force; and

5 (c) driving and controlling the driving source to ensure output of a driving force to an axle based on a drive change demand of the vehicle and the calculated adjustment control value.

10 16. An automobile control method in accordance with claim 15, wherein said step (b) regulates phase and magnitude of a longitudinal acceleration in the vehicle longitudinal direction out of the steering-based acceleration, so as to calculate the adjustment control value.

15 17. An automobile control method in accordance with claim 15, wherein said step (b) calculates the adjustment control value to set at least one of a pitching level and a rolling level of the vehicle, which is caused by the steering-based
20 acceleration, to a specified level.

 18. An automobile control method in accordance with claim 15, wherein said step (b) calculates the adjustment control value to reduce at least one of a pitching level and a rolling
25 level of the vehicle, which is caused by the steering-based acceleration.